

AMENDMENTS TO THE CLAIMS

Claims 1-45. (Canceled)

46. (New) An analog-to-digital converter comprising

- a sigma-delta-modulator comprising

 a plurality of cascaded integrators,

 a comparator for signal quantization,

- monitoring means adapted to monitor a signal swing of an output signal of at least one of the plurality of integrators and to determine if the monitored signal swing exceeds a predefined threshold value, the predefined threshold value being associated with a maximum stable input amplitude of the sigma-delta-modulator, and

- controlling means adapted to reduce the output signal of at least one of the plurality of integrators by a predefined factor or value so as to bring the monitored signal swing below the predefined threshold value.

47. (New) An analog-to-digital converter according to claim 46, wherein the predefined threshold value is less than 90% of a maximum stable input amplitude.

48. (New) An analog-to-digital converter according to claim 46, comprising at least three cascaded integrators, wherein the monitoring means and the controlling means are adapted to function for each of the at least one integrators positioned as number three and onwards away from the input.

49. (New) An analog-to-digital converter according to claim 46, wherein the controlling means is adapted to reduce the output signal by multiplying a state variable of the at least one integrator by a predetermined clamping factor.

50. (New) A microphone module comprising an analog-to-digital converter according to claim 46.

51. (New) A mobile unit comprising an analog-to-digital converter according to claim 50.

52. (New) A mobile unit according to claim 51, wherein the mobile unit is selected from the group consisting of: hearing aids, cellular phones and head-sets.